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PRC

October 10, 1991

Mr. Arturo Duran
U.S. Environmental Protection Agency
999 18th Street
Denver, Colorado 80202

RE: Final Treatability Studies Plan, Rocky Flats Plant, Golden, Colorado
Work Assignment Number C08061, Contract Number 68-W9-0009 (TES 12)

Dear Mr. Duran:

PRC Environmental Management, Inc. (PRC) reviewed the final treatability studies plan (TSP) for the Rocky Flats Plant (RFP) dated August 26, 1991 under work assignment number C08061. The revised TSP and the accompanying appendices were compared with comments made on the final document dated June 3, 1991. The addition of greater detail and an executive summary have improved the clarity of the document. However, some remaining inconsistencies, identified in the following comments, affect the utility of the TSP.

GENERAL COMMENTS

1. Several technologies have been selected for treatability studies at specific operable units (OUs) and one other has been selected for use in the U.S. Environmental Protection Agency (EPA) Superfund Innovative Technology Evaluation (SITE) Program. These treatment technologies should be identified in the text, tables, and appendices of the final TSP. In addition, the relationship between the current treatability studies and the site-wide treatability studies program should be described. Similarly, the treatment technologies that are currently being utilized at specific operable units (OUs) at RFP should be described in relation to the site-wide treatability studies program to clearly understand the work being done at RFP.

2. References to biological treatment technologies in the text and the screening tables are not clear and do not reflect detailed research into the specific technologies available. Previous comments on the TSP recommended that specific biological treatment technologies be discussed. However, no further discussion has been added to the final TSP to define the terms "anaerobic" biological treatment, "bioaccumulation," and "land treatment." These terms should be explained and evaluated in the same level of detail as other treatment technologies. Accurate and current information should be provided for all technologies presented in the TSP to maximize the utility of the document.

SPECIFIC COMMENTS

1. Page 3-7, Paragraph 8. This paragraph discusses the SITE Program. The "Techtran RHM 1000 Process" is now referred to as the "Filter Flow Technologies, Colloid Polishing Filter Method." This paragraph indicates that the treatment applies to radionuclides and heavy metals. In addition, the text states the colloid polishing method collects and treats water from the solar pond (OU4) seepage collection system.

   A SITE demonstration using the colloid polishing method is underway at RFP. It is being applied only to radionuclides and not to heavy metals. In addition, the process is proposed only for treatment, not for collection of water from the OU4 seepage collection system. The text should be corrected as appropriate.

   Rationale: Accurate and current information should be provided for technologies presented in the TSP to maximize the utility of the document.

2. Page 4-11, Paragraph 2. This paragraph indicates that treatments for polychlorinated biphenyls (PCBs) will be considered at a later date. Technologies applicable to the treatment of PCB contamination have not been identified in the text, tables, or technology data sheets. PCBs have been found at RFP and alternatives for treating these compounds should be considered in this document.

   Rationale: The presence of PCBs at RFP requires consideration of potentially applicable treatment alternatives.

3. Pages 5-2 and 5-3, Figures 5-1 and 5-2. These figures illustrate the treatability study process and the technology selection process, respectively. Comments on the June 3, 1991 TSP suggested an explanation of the interaction between the management decision factor and the screening process be included in the text. Only the titles on these figures were changed and adequate detail was not added to the text discussion regarding management decisions. The management decision factor should be described in further detail.

   Rationale: Information illustrated in figures should be complete and supported by explanations in the text.

4. Page 7-2, Figure 7-1. This figure presents the tentative treatability studies plan schedule for work to be completed during the site-wide treatability studies program. The time line bars and the dates on the figure do not match. Dates and time line bars should be consistent.

   Rationale: Consistency among text and figures contributes to the clarity of the docume

5. Tables 5-7A and 5-7B. Table 5-7A, which lists technologies for treatment of water, does not include a category for semivolatile organic compounds (SVOCs). Table 5-7B, which lists technologies for treatment of soil, does not include categories for SVOCs, volatile organic compounds (VOCs), or inorganic compounds. The other screening tables consider technologies for these contaminants. The same categories should be included in Tables 5-7A and 5-7B for consistency throughout the screening process.

   Rationale: Consistency among the screening tables will contribute to the clarity and utility of the document.

6. Tables 5-7A, 5-7B, 5-8, and 5-9. These tables present information on the technologies retained after preliminary screening. They are not organized in the same manner as the preliminary screening tables (Tables 5-3, 5-4, 5-5, and 5-6). In the text and screening tables, information is organized by medium, contaminant group, and type of technology. The organization of the final screening tables should be consistent with the rest of the document. This will establish continuity among the tables, and aid in the clear understanding of the technologies being considered for treatability testing and the screening process.

   Rationale: Consistency among text and tables contributes to the clarity and utility of the document.

7. Appendix B. According to the text, a technology data sheet was to be provided for each technology retained after preliminary screening. In most cases, the technology data sheets apply to specific treatment process options. Two exceptions are chemical oxidation and solidification/stabilization which are broad technology categories which include more specific process options. Ozonation, peroxide oxidation, and ultraviolet oxidation are mentioned in the chemical oxidation technology data sheet, and cement- and polymer-based technologies are mentioned in the solidification/stabilization technology data sheet. However, individual technology data sheets are not included for these methods. Separate technology data sheets should be provided for each process option considered in the final screening stage, regardless of whether it is related to other technologies being screened. In addition, the solidification/stabilization technology data sheet is not listed on page 1 of Appendix B.

   Rationale: Information presented on the technology data sheets should be sufficiently detailed to provide an understanding of the processes involved for each screened technology.

8. Appendices B and C. The technology data sheets presented in Appendices B.1 and B.2 and the statements of work presented in Appendix C are not organized in the same manner as the preliminary screening tables (Tables 5-3, 5-4, 5-5, and 5-6). In the text and screening tables, information is organized by medium, contaminant group, and type of technology. However, the final screening information is not separated by contaminant group nor by type of technology. The organization of technology data sheets and statements of work should be

consistent with the rest of the document to aid in the clear understanding of the screened technologies.

Rationale: Consistency among text, tables, and appendices contributes to the clarity and utility of the document.

In summary, the consistency of the final TSP has been greatly improved since the June 3, 1991 technical review. PRC's review of the final TSP indicates several issues which should be addressed in the annual updates. Most of the concerns are based on inconsistencies among the text and the preliminary and final screening information. By addressing the organizational differences between the screening tables, the technology data sheets, and statements of work, the information presented would be more consistent.

If you have any questions, please contact me at 295-1101.

Sincerely,

PRC Environmental Management, Inc.

Lynn A. Davies

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LAD/drp

cc: Josh Marvil, PRC
PRC file